



# Australian Bureau of Statistics

## 6302.0 - Average Weekly Earnings, Australia, Nov 2012

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## Summary

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Includes: Commentary on Original series data.

## In this issue

### IN THIS ISSUE

### FREQUENCY CHANGE

The frequency of the average weekly earnings series has changed from quarterly to biannual. The May 2012 publication was the final quarterly issue and this issue is the first produced on a biannual basis. For full details on the change in frequency, refer to the Information Paper: Changes to Average Weekly Earnings, Australia, April 2012 (cat. no. 6302.0.55.002).

### SEASONALLY ADJUSTED AND TREND ESTIMATES

As part of the transition to a biannual frequency, an assessment was conducted on the feasibility of releasing biannual seasonally adjusted and trend estimates. It was determined that reducing the frequency of collection did not eliminate observed seasonality for some time series leaving 27 biannual series needing seasonal adjustment. All other series are no longer seasonally adjusted and where this is applicable the seasonally adjusted estimate will be exactly equal to the original series estimate. Relevant series are footnoted in this publication.

In addition, the change in frequency has resulted in a shift in the level of seasonally adjusted and trend estimates and, therefore, new series have been released in the November 2012 publication. The series commence with May 2012 data. Seasonally adjusted and trend estimate data prior to May 2012 are still available in the May 2012 issue. For further details on seasonally adjusted and trend estimates, refer to paragraphs 40 to 47 in the Explanatory Notes.

## PUBLICATION FORMAT CHANGE

This publication is in an e-magazine (HTML) format, replacing the previous PDF style publication. The ABS will review this revised publication and welcomes feedback on its content and format.

## FEATURE ARTICLE

In addition to the information presented in this e-magazine publication, a feature article examining Salary Sacrifice in Australia will be added to this issue on 7 March 2013.

## INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Francesco Tornatore on Perth (08) 9360 5304.

# Key Figures



## KEY FIGURES

### KEY FIGURES

The following table contains the key Average Weekly Earnings figures for the November 2012 reference period.

**Table 1: Average Weekly Earnings, Key Figures, November 2012**

	November 2012	November 2011 to November 2012 % change
	\$	%
Trend		
Public & Private Sectors		
Full-time adult average weekly ordinary time earnings	1 393.00	4.8
Full-time adult average weekly total earnings	1 453.60	4.7
All employees average weekly total earnings	1 080.30	4.5
Private Sector		
Full-time adult average weekly ordinary time earnings	1 366.80	5.0
Full-time adult average weekly total earnings	1 432.00	4.9
All employees average weekly total earnings	1 038.30	4.7
Public Sector		
Full-time adult average weekly ordinary time earnings	1 489.50	4.5
Full-time adult average weekly total earnings	1 534.10	4.3

All employees average weekly total earnings	1 255.50	4.3
Seasonally Adjusted		
Public & Private Sectors		
Full-time adult average weekly ordinary time earnings(b)	1 396.00	5.0
Full-time adult average weekly total earnings	1 454.80	4.8
All employees average weekly total earnings(b)	1 081.30	4.6
Private Sector		
Full-time adult average weekly ordinary time earnings(b)	1 369.90	5.1
Full-time adult average weekly total earnings	1 433.20	5.0
All employees average weekly total earnings(b)	1 039.30	4.7
Public Sector		
Full-time adult average weekly ordinary time earnings(b)	1 491.70	4.5
Full-time adult average weekly total earnings(b)	1 536.20	4.3
All employees average weekly total earnings(b)	1 257.40	4.5

(a) For further information regarding Trend and Seasonally Adjusted estimates, please refer to paragraphs 40 to 47 of the Explanatory Notes.

(b) This component is not seasonally adjusted.

## TREND ESTIMATES

In the twelve months to November 2012, Trend series Full-Time Adult Average Weekly Ordinary Time Earnings increased by 4.8%. The annual increase to November 2012 for males was 4.9% and females was 4.7%.

In the twelve months to November 2012, Full-Time Adult Average Weekly Total Earnings rose by 4.7% (4.8% for males and 4.6% for females).

To access the time series spreadsheets related to the measures presented above, please refer to the following link or click on the downloads tab at the top of the page.

## Australia



## AUSTRALIA

Table 2 below presents the key Average Weekly Earnings, Australia figures in Trend estimate terms. Trend estimates are obtained by removing the irregular component/non-seasonal influences from the data. They are considered a reliable guide to the underlying direction of the series.

The annual Trend movement for Full-Time Adult Average Weekly Ordinary Time Earnings was higher for males than females, at 4.9% and 4.7% respectively. Male overtime earnings also increased at a greater rate than female overtime earnings, with Full-Time Adult total earnings for males having increased by 4.8%, compared with 4.6% for females in the twelve months to November 2012.

**Table 2: Average Weekly Earnings, Australia, Trend<sup>(a)</sup>, November 2012**

	November 2012	November 2011 to November 2012 % change
	\$	%
Males		
Full-time adult average weekly ordinary time earnings	1 489.10	4.9
Full-time adult average weekly total earnings	1 576.60	4.8
All employees average weekly total earnings	1 323.10	5.3
Females		
Full-time adult average weekly ordinary time earnings	1 227.50	4.7
Full-time adult average weekly total earnings	1 243.80	4.6
All employees average weekly total earnings	839.50	3.9
Persons		
Full-time adult average weekly ordinary time earnings	1 393.00	4.8
Full-time adult average weekly total earnings	1 453.60	4.7
All employees average weekly total earnings	1 080.30	4.5

(a) For further information regarding Trend estimates, please refer to paragraphs 44 to 47 of the Explanatory Notes.

Original series data presented below has not been adjusted to remove the effects of either seasonal or irregular influences. Compared with November 2011, Full-Time Adult Average Weekly Ordinary Time Earnings have grown by 5.0% to \$1,396.00.

**Table 3: Average Weekly Earnings, Australia, Original, November 2012**

	November 2012	November 2011 to November 2012 % change
	\$	%
Males		
Full-time adult average weekly ordinary time earnings	1 491.80	5.0
Full-time adult average weekly total earnings	1 580.30	5.0
All employees average weekly total earnings	1 324.30	5.5
Females		
Full-time adult average weekly ordinary time earnings	1 230.10	4.8
Full-time adult average weekly total earnings	1 246.30	4.6
All employees average weekly total earnings	840.00	4.0
Persons		
Full-time adult average weekly ordinary time earnings	1 396.00	5.0
Full-time adult average weekly total earnings	1 458.00	4.9
All employees average weekly total earnings	1 081.30	4.6

To access the time series spreadsheets related to the three measures presented above, please refer to the following link or click on the downloads tab at the top of the page.

## Private & Public Sector Earnings



PRIVATE & PUBLIC SECTOR EARNINGS

## PRIVATE & PUBLIC SECTOR EARNINGS

The annual movement in Full-Time Adult Average Weekly Ordinary Time Earnings was 5.1% for the Private sector and 4.5% for the Public sector.

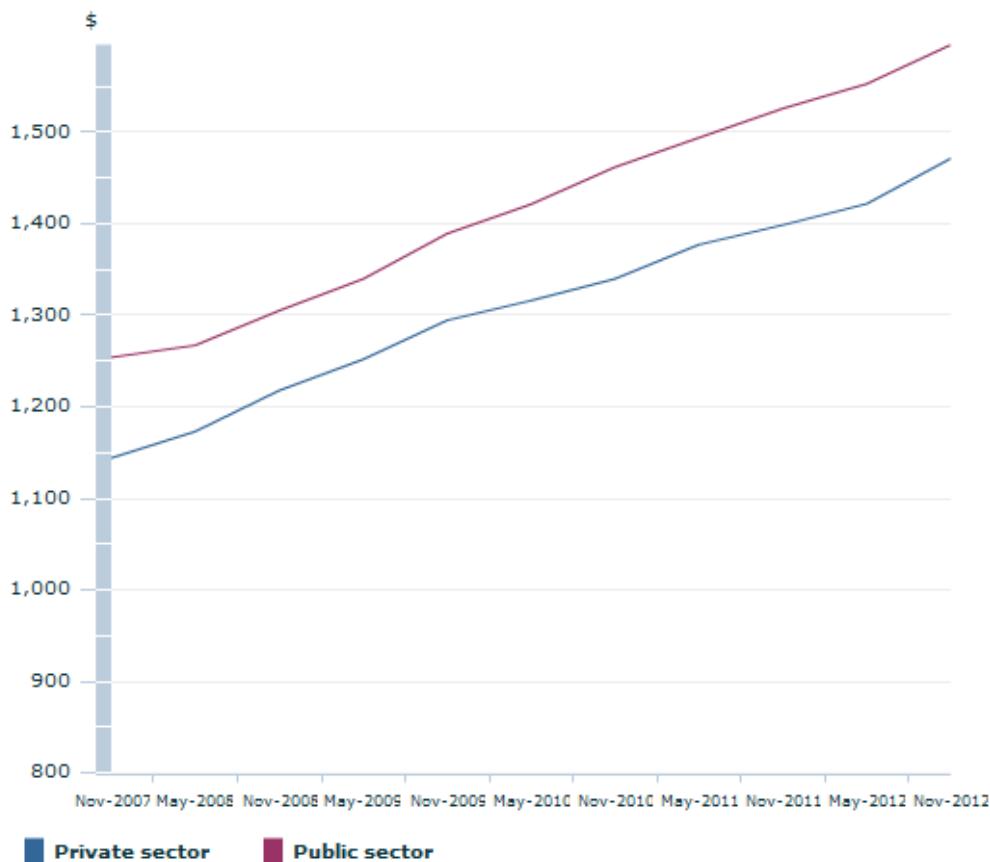
In November 2012, those employed in the Public sector had higher Full-Time Adult Average Weekly Ordinary Time Earnings than their Private sector counterparts, at \$1,491.70 and \$1,369.90 respectively (a difference of \$121.80). The difference was more pronounced in the All Employees Total Earnings series in November 2012; employees in the Public sector on average earned \$218.10 dollars per week more than those employed in the Private sector.

**Table 4: Average Weekly Earnings, By Sector, Original, November 2012**

Full-time adult average weekly ordinary time earnings	November 2011 to November 2012, % change	Full-time adult average weekly total earnings	November 2011 to November 2012, % change	All employees average weekly total earnings	November 2011 to November 2012, % change	\$	%
	\$	%	\$	%	\$	%	
Private sector	1 369.90	5.1	1 436.70	5.0	1 039.30	4.7	
Public sector	1 491.70	4.5	1 536.20	4.3	1 257.40	4.5	
Australia	1 396.00	5.0	1 458.00	4.9	1 081.30	4.6	

The Full-Time Adult Male Average Weekly Ordinary Time Earnings annual movement to November 2012 was 4.5% in the Public sector (increasing to \$1,595.20) and 5.2% in the Private sector (increasing to \$1,471.00).

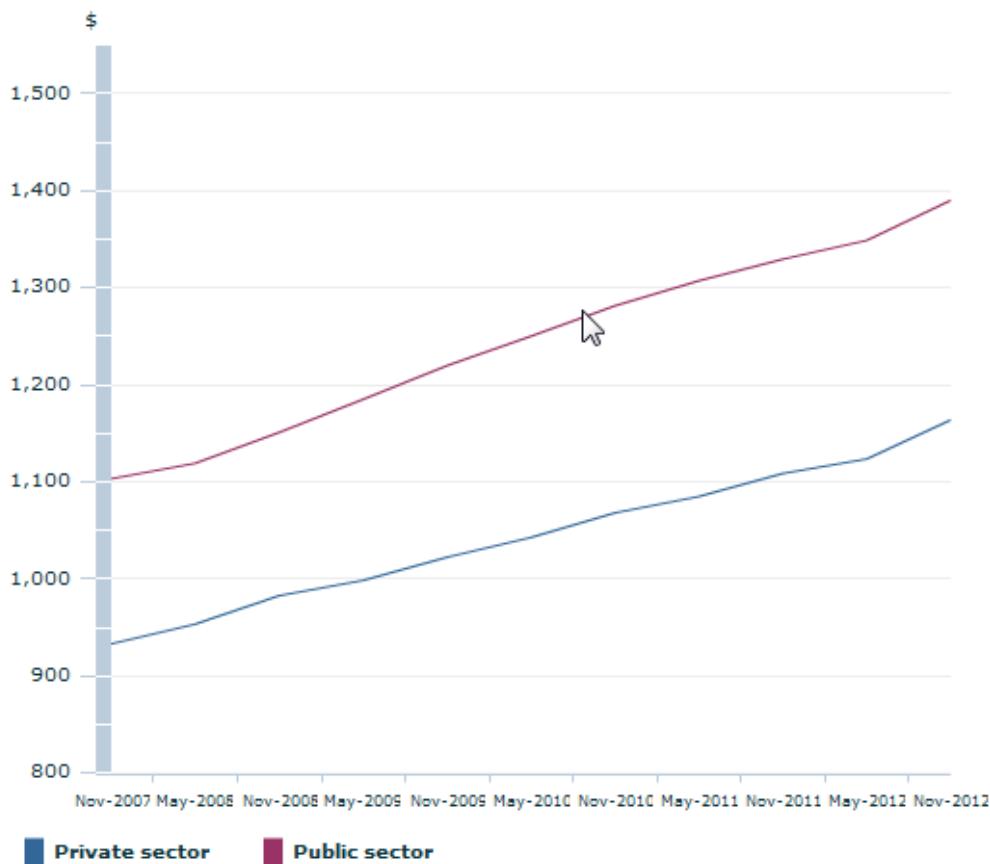
**Chart 1. Average weekly ordinary time earnings, Full-time Adult Males, Sector**



**Source(s):** Average Weekly Earnings, Australia

The Full-Time Adult Female Average Weekly Ordinary Time Earnings annual movement was 4.9% in the Private sector and 4.6% in the Public sector. Despite a smaller annual percentage increase in earnings, females employed in the Public sector, on average earned more than those in the Private sector (\$1,389.80 compared with \$1,163.40).

**Chart 2. Average weekly ordinary time earnings, Full-time Adult Females, Sector**



**Source(s):** Average Weekly Earnings, Australia

For further earnings information related to sector, including breakdown by sex and estimates in Trend and Seasonally Adjusted terms, please refer to the time series spreadsheets in the following link or click on the downloads tab at the top of the page.

## Industry Earnings



### INDUSTRY EARNINGS

#### INDUSTRY EARNINGS

The Administrative and support services industry recorded the highest annual percentage movement in Full-Time Adult Average Weekly Ordinary Time Earnings (10.2%).

Those employed in the Mining industry had the highest level of Full-Time Adult Average Weekly Ordinary Time Earnings in Australia at \$2,360.90. This was \$718.80 more per week than the next highest, Financial and insurance services (\$1,642.10). The industry with the lowest level of Full-Time Adult Average Weekly Ordinary Time Earnings was the Accommodation and food services industry (\$992.80), closely followed by Retail trade (\$1,008.30).

**Table 5: Average Weekly Earnings, By Industry, Original, November 2012**

	Full-time adult average weekly ordinary time earnings	November 2011 to November 2012 % change	Full-time adult average weekly total earnings	November 2011 to November 2012 % change	All employees average weekly total earnings	November 2011 to November 2012 % change
	\$	%	\$	%	\$	%
Mining	2 360.90	8.0	2 426.00	7.3	2 381.20	9.6
Manufacturing	1 223.00	2.6	1 316.20	2.3	1 157.50	1.1
Electricity, Gas, Water and Waste Services	1 610.50	6.8	1 750.00	4.6	1 665.10	4.3
Construction	1 418.70	3.7	1 607.70	5.2	1 377.90	5.4
Wholesale Trade	1 414.40	5.6	1 464.00	4.9	1 299.20	3.7
Retail Trade	1 008.30	3.0	1 028.20	3.0	647.10	3.7
Accommodation and Food Services	992.80	3.7	1 003.20	3.2	530.30	6.6
Transport, Postal and Warehousing	1 369.40	6.3	1 533.50	8.9	1 317.50	8.1
Information Media and Telecommunications	1 631.80	5.7	1 648.40	5.3	1 434.90	5.1
Financial and Insurance Services	1 642.10	6.1	1 651.70	5.1	1 423.90	3.6
Rental, Hiring and Real Estate Services	1 308.70	7.5	1 356.00	7.2	1 074.60	7.6
Professional, Scientific and Technical Services	1 633.90	3.3	1 663.90	2.8	1 392.70	2.9
Administrative and Support Services	1 269.60	10.2	1 310.90	9.7	890.00	4.9
Public Administration and Safety	1 479.40	5.5	1 516.80	5.1	1 333.10	5.0
Education and Training	1 474.10	4.8	1 478.00	4.7	1 045.90	6.1
Health Care and Social Assistance	1 306.90	3.0	1 353.30	2.7	903.00	0.5
Arts and Recreation Services	1 234.00	2.7	1 259.70	3.3	745.30	8.2
Other Services	1 105.90	5.3	1 146.20	3.8	878.10	5.9
Total All Industries	1 396.00	5.0	1 458.00	4.9	1 081.30	4.6

The difference in the level of earnings by gender varied significantly across industries. The industry with the largest difference between male and female average earnings was the Financial and insurance services industry (\$1,968.70 for males compared with \$1307.70 for females for Full-Time Adult Average Weekly Ordinary Time Earnings). The industry with the smallest difference was the Accommodation and food services industry (\$1,012.30 and \$959.50 for males and females respectively).

It is important to note that while AWE data can be used to compare, at the very broad level, average earnings between males and females, such comparisons do not take into account a range of compositional differences, for examples differences in occupation or hours worked, which contribute significantly to the differences observed between male and female earnings. For further comparisons between male and female wages, including hourly rates and by occupation, refer to [Employee Earnings and Hours](#) (6306.0).

For further earnings information related to industry, including breakdown by sex, please refer to the time series spreadsheets in the following link or click on the downloads tab at the top of the

page.

## State & Territory Earnings



### STATE & TERRITORY EARNINGS

#### STATE & TERRITORY EARNINGS

The Australian Capital Territory recorded the highest annual movement in Full-Time Adult Average Weekly Ordinary Time Earnings, at 6.2%. This was 0.4 of a percentage point higher than the next highest, New South Wales (5.8%). The lowest annual movement was in the Northern Territory at 2.8%.

Those employed in the Australian Capital Territory had the highest Full-Time Adult Average Weekly Ordinary Time Earnings at, \$1,645.10, followed by Western Australia (\$1,590.60). The Australian Capital Territory has a high proportion of Public sector workers, who on average earn more than those in the Private sector. In recent years WA has experienced a resource sector boom which has had a significant influence on wages in the Mining industry as well as on those businesses providing services to Mining (for example, some businesses in the Construction and Wholesale trade industries).

**Table 6: Average Weekly Earnings, By State, Original, November 2012**

	Full-time adult average weekly ordinary time earnings	November 2011 to November 2012, % change	Full-time adult average weekly earnings	November 2011 to November 2012, % change	All employees total earnings	November 2011 to November 2012, % change
	\$	%	\$	%	\$	%
New South Wales	1 398.90	5.8	1 448.80	5.3	1 081.20	6.4
Victoria	1 331.00	3.0	1 392.40	3.4	1 023.70	2.6
Queensland	1 370.10	5.4	1 437.30	5.3	1 065.90	2.8
South Australia	1 276.00	4.5	1 330.30	5.3	968.90	4.3
Western Australia	1 590.60	4.4	1 692.40	3.6	1 244.00	4.3
Tasmania	1 226.60	4.3	1 264.90	4.3	934.40	5.7
Northern Territory	1 417.40	2.8	1 496.50	4.1	1 235.60	5.1
Australian Capital Territory	1 645.10	6.2	1 665.90	6.0	1 384.40	7.6
Australia	1 396.00	5.0	1 458.00	4.9	1 081.30	4.6

In the twelve months to November 2012, the largest percentage increases in Full-Time Adult Male Average Weekly Ordinary Time Earnings occurred in New South Wales (7.0%) and the Australian Capital Territory (6.5%). For females, the largest increases were in Tasmania (6.5%) and Queensland (6.3%).

For further earnings information related to States and Territories, including detailed breakdown

by sex, please refer to the time series spreadsheets in the following link or click on the downloads tab at the top of the page.

## Salary Sacrifice Feature Article



### SALARY SACRIFICE FEATURE ARTICLE

#### INTRODUCTION

This article highlights how information from the ABS, in particular the biannual Average Weekly Earnings (AWE) survey, can be used to analyse trends in the salary sacrifice arrangements of Australian employees.

#### BACKGROUND

Salary sacrifice is defined as an arrangement where an employee agrees to forgo part of his or her salary in return for benefits of a similar value. Common types of salary sacrifice arrangements include pre-tax contributions to superannuation funds and novated leases for motor vehicles.

Currently in Australia, there are different salary sacrifice entitlements for different categories of employees. For example, the Australian Taxation Office (ATO) allows employees of Public Benevolent Institutions (PBI) up to \$30,000 in Fringe Benefit Tax (FBT) free benefits over the FBT year. Additionally, in the 2011-12 financial year, employees aged 50 and over were entitled to sacrifice up to \$50,000 of their salary to a complying superannuation fund in the financial year (although this was reduced to \$25,000 in the 2012-13 financial year). These super contributions are FBT-free and are taxed in the super fund at a maximum rate of 15%, which is generally much lower than if the amounts were subject to Pay As You Go withholding tax. For employees under the age of 50, the concessional contributions cap (i.e. the amount of superannuation that can be salary sacrificed at the lower tax rate and without attracting FBT) was \$25,000 for the 2011-12 financial year.

The Average Weekly Cash Earnings (AWCE) series, which is inclusive of amounts salary sacrificed, is collected as part of the AWE survey and a historical series dating back to the May 2010 quarter is available. This series is released in addition to, and does not replace, the original AWE series which is exclusive of salary sacrifice. For further information on the background to these changes, refer to [Information Paper: Changes to ABS Measures of Employee Remuneration](#) (cat. no. 6313.0).

The AWE and AWCE series provide estimates of average weekly earnings and average weekly amounts salary sacrificed. While the series show average amounts for a population (e.g. Total Australia), the series cannot separately provide details on those employees who salary sacrifice. This means, for example, that the amount salary sacrificed by those doing so will be higher than the average amount sacrificed by all employees.

Information on salary sacrifice is available from other ABS releases including:

- [Household Income and Income Distribution, Australia, 2009-10](#) (cat. no. 6523.0), which can allow analysis on the types of benefits employees salary sacrifice to (for example, superannuation, vehicle, etc.), and

- [Employee Earnings and Hours, Australia, May 2012](#) (cat. no. 6306.0), which can allow average weekly amounts of salary sacrifice to be considered by occupation.

Unless otherwise footnoted, the salary sacrifice amounts are sourced from the AWE survey and can be calculated by subtracting the AWE series from the relevant AWCE series. These series are located under the Downloads tab of this publication. For example, Graph 2, Private sector, Average weekly salary sacrifice for Full-time adults, November 2012: (Table 15, November 2012, AWCE, Private sector, Full-time, Adult, Ordinary time earnings, \$1,400.70) minus (Table 6, November 2012, AWE, Private sector, Full-time, Adult, Ordinary time earnings, \$1,369.90) equals (November 2012, Private sector, Full-time, Adult, Salary sacrifice, \$30.80).

## AVERAGE WEEKLY SALARY SACRIFICE

Graph 1 depicts average weekly amounts of salary sacrifice in Australia for full-time adults over the two years to November 2012.

**Graph 1. Average Weekly Salary Sacrifice, Full-time Adults, Australia**



**Source(s):** Average Weekly Earnings

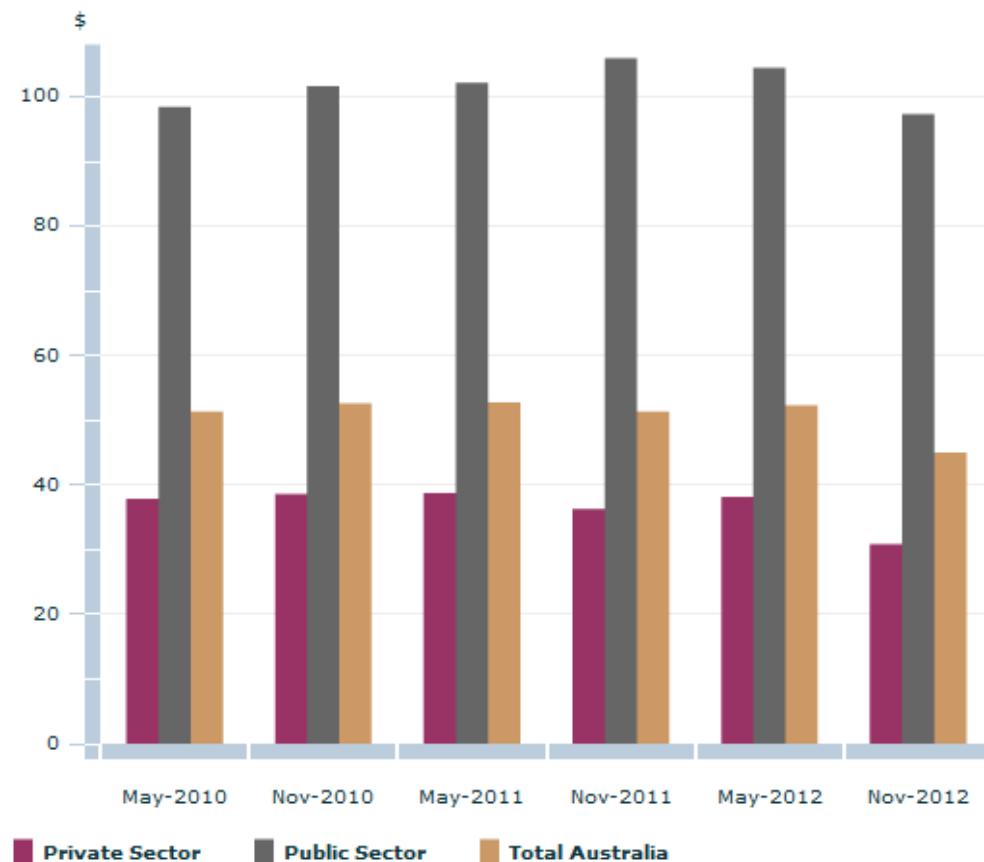
As can be seen from the above graph, average weekly amounts of salary sacrifice can vary significantly from quarter to quarter. Amounts of salary sacrificed by an employee can be affected by a change in his or her earnings, for example, an increase in the level of overtime worked or commissions earned. Additionally, some employees sacrifice more of their salary at the beginning of the financial year and then the amount tapers off towards the end of the year when he or she has reached the concessional contributions cap for salary sacrificing superannuation. For other employees, the amount of salary sacrificed increases towards the end of the financial year to ensure the cap is reached.

In the six months to November 2012, average weekly amounts of salary sacrifice for full-time adults decreased from \$52.30 to \$45.00 (a decrease of 13.9%). This is largely attributable to the decrease for the 2012-13 financial year in the concessional contributions cap from \$50,000 to \$25,000 for people aged 50 and over.

## SECTOR

Graph 2 illustrates average weekly amounts of salary sacrifice by sector.

**Graph 2. Average Weekly Salary Sacrifice, Full-time Adults, Sector**



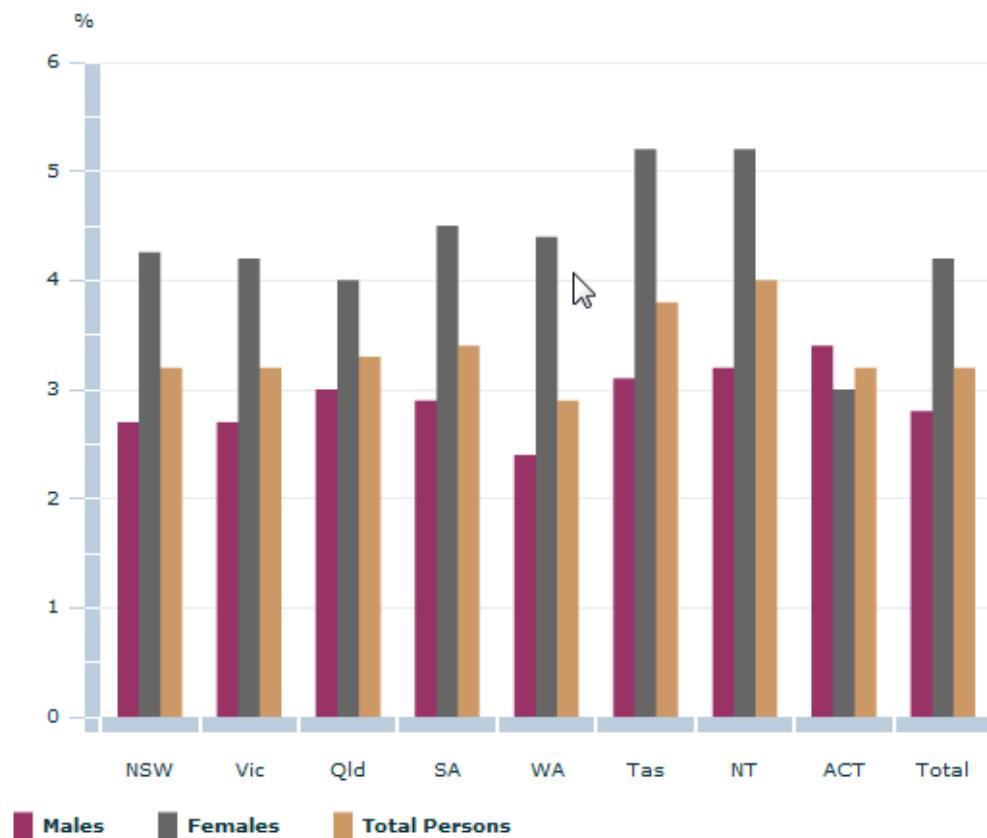
**Source(s):** Average Weekly Earnings

The above data highlights the disparity in average weekly amounts of salary sacrifice between the private and public sectors. In November 2012, the average weekly amount of salary sacrifice by full-time adults in the public sector was \$97.30 per week, compared with \$30.80 for their counterparts in the private sector. As a proportion of AWE ordinary time earnings, public sector salary sacrifice was also significantly higher than the private sector; public sector average weekly salary sacrifice was 6.5% of full-time adult total earnings, while private sector was 2.2%. One anecdotal explanation for the higher level of public sector salary sacrifice is that there is greater access to salary sacrifice arrangements in this sector.

## STATES AND TERRITORIES

Graph 3 provides a breakdown of the proportion of average total weekly ordinary time earnings that have been salary sacrificed by state and territory and by sex.

**Graph 3. Salary Sacrifice as a proportion of Total ordinary time earnings, by State or Territory, Nov 2012(a)**



**Footnote(s):** (a) Full-time Adults

**Source(s):** Average Weekly Earnings

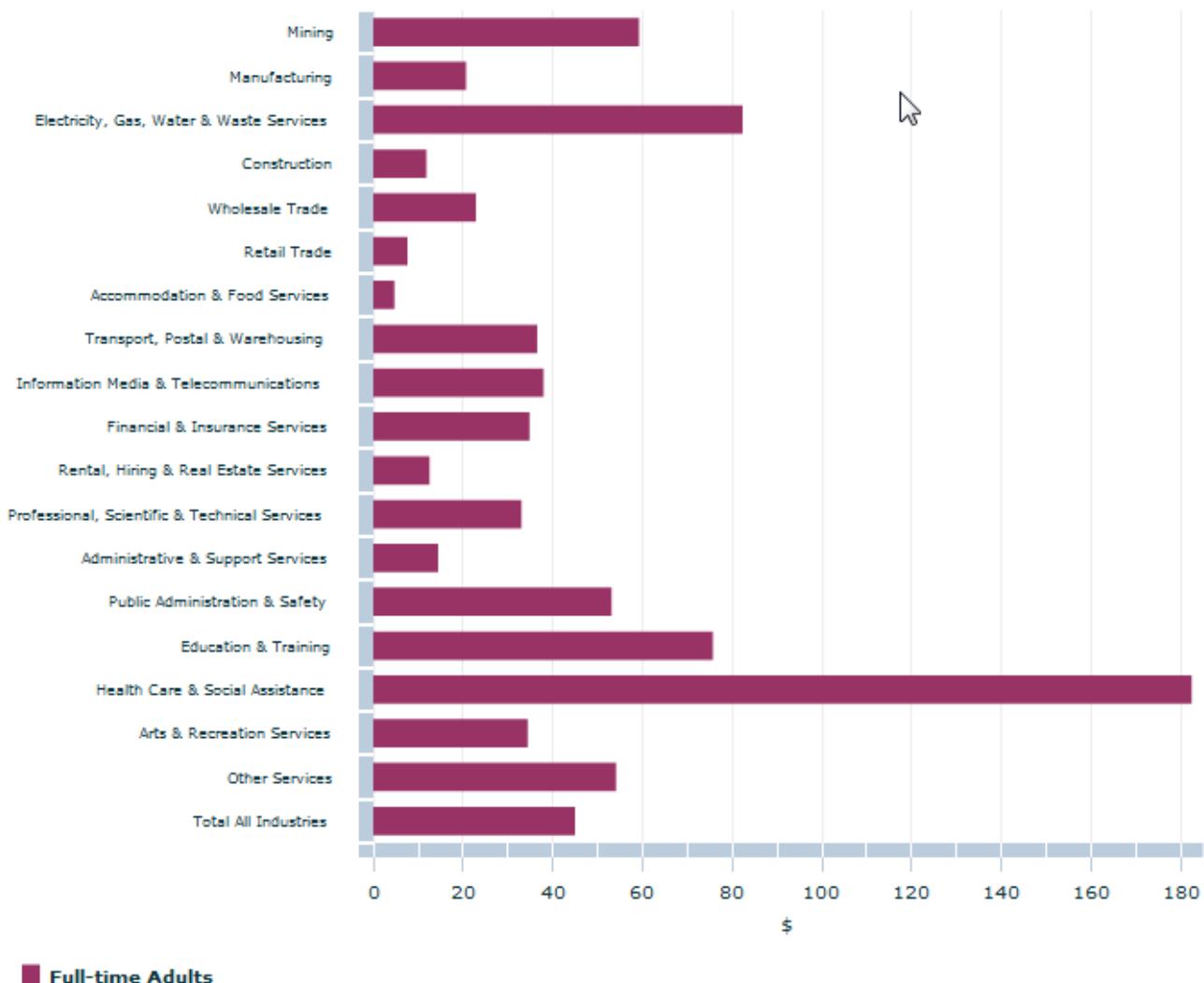
Graph 3 shows that Tasmania and the Northern Territory had the highest proportion of average weekly amounts of salary sacrifice, particularly amongst female employees. This reflects that these states had a high proportion of employees in the Health care and social assistance industry, which is the industry with by far the greatest average weekly amount of salary sacrifice (as illustrated by Graph 4 below).

The Australian Capital Territory (ACT) had the highest proportion of average weekly salary sacrifice for male employees reflecting the high proportion of public sector workers, who, on average, salary sacrifice larger amounts of their earnings than their private sector counterparts (refer Graph 2). Conversely the ACT was the only state or territory where females salary sacrifice less on average than males. The low proportion of average weekly amounts of salary sacrifice for females in the ACT can be attributed to the ACT having a lower proportion of employees in the female dominated Health care and social assistance industry.

## INDUSTRY

Graph 4 shows average weekly amounts of salary sacrifice by industry.

**Graph 4. Average Weekly Salary Sacrifice, Full-time Adults, by Industry, Nov 2012**



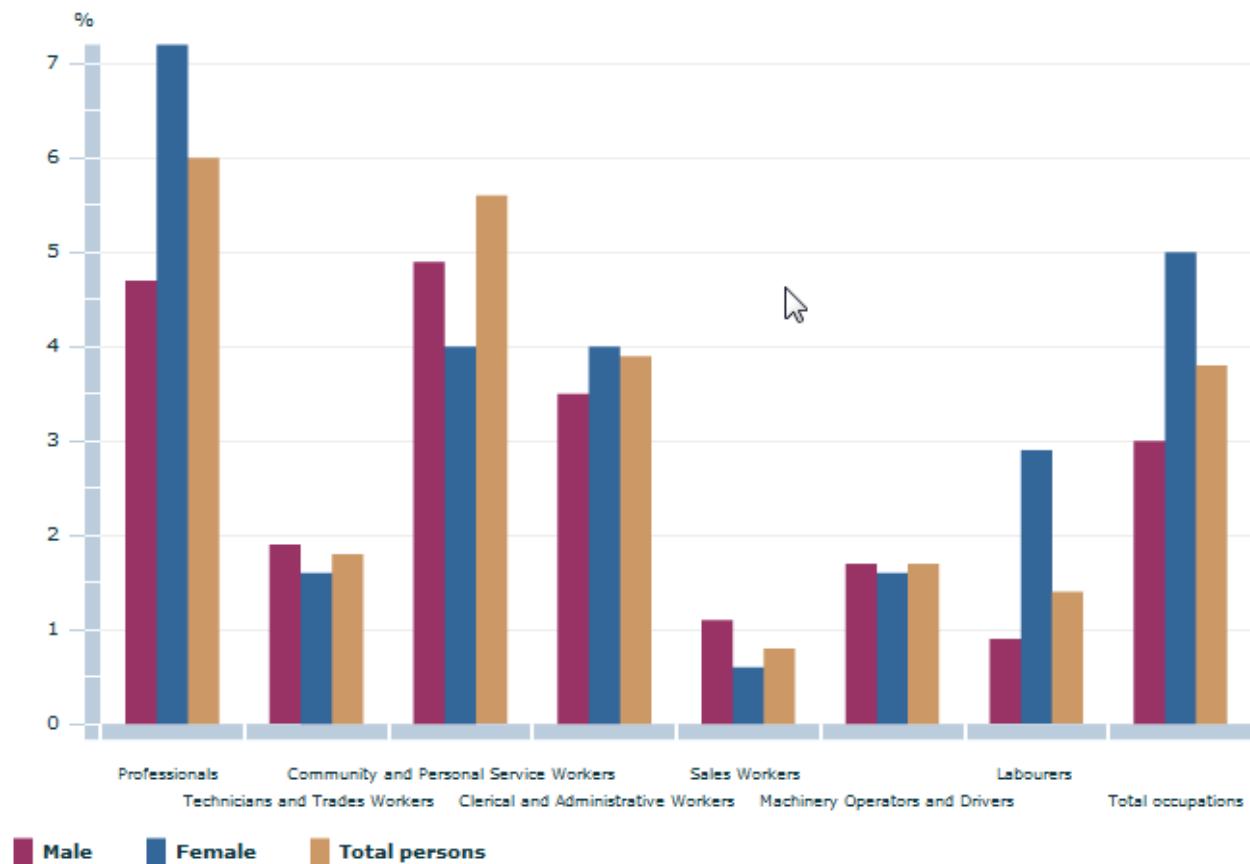
**Source(s):** Average Weekly Earnings

Graph 4 shows that on average, employees in the Health care and social assistance industry salary sacrifice significantly larger amounts of their earnings per week. For November 2012, full-time adults in this industry salary sacrifice on average \$182.50 per week, more than double the average of the next highest industry (Electricity, gas, water and waste services; \$82.40). As a proportion of full-time adult total earnings, average weekly amounts of salary sacrifice was 14.0% in the Health care and social services industry, compared with the all industries proportion of 3.2%. This is due to the prevalence in this industry of organisations such as hospitals and charitable organisations which have PBI status and, therefore, employees have access to higher FBT-free allowances. Employees of most PBIs are entitled to salary sacrifice up to \$30,000 without attracting FBT, while employees of PBIs that are hospitals are entitled to salary sacrifice up to \$17,000 FBT-free.

## OCCUPATION

Graph 5 shows the average weekly amount of salary sacrifice as a proportion of total earnings, broken down by broad level occupation, as produced by the biennial Survey of Employee Earnings and Hours.

**Graph 5. Average Salary Sacrifice as proportion of Earnings, by Occupation, May 2012**



**Source(s):** Employee Earnings and Hours (cat. no. 6306.0)

Graph 5 shows that employees classified as Professionals salary sacrifice the highest percentage of their earnings on average (6.0%). This occupation category includes Health professionals such as registered nurses who are prevalent in hospitals and other organisations with PBI FBT-free entitlements. Education professionals, such as teachers are also included in this category and a significant number of these workers are employed in the public sector, which has higher levels of average salary sacrifice than the private sector (refer Graph 2.).

The occupation with the second highest proportion of average weekly amounts of salary sacrifice was Community and Personal Service Workers (5.6%). Many workers classified in this occupation group are employed by organisations with PBI status (for example, Welfare support workers and Aged and disabled carers).

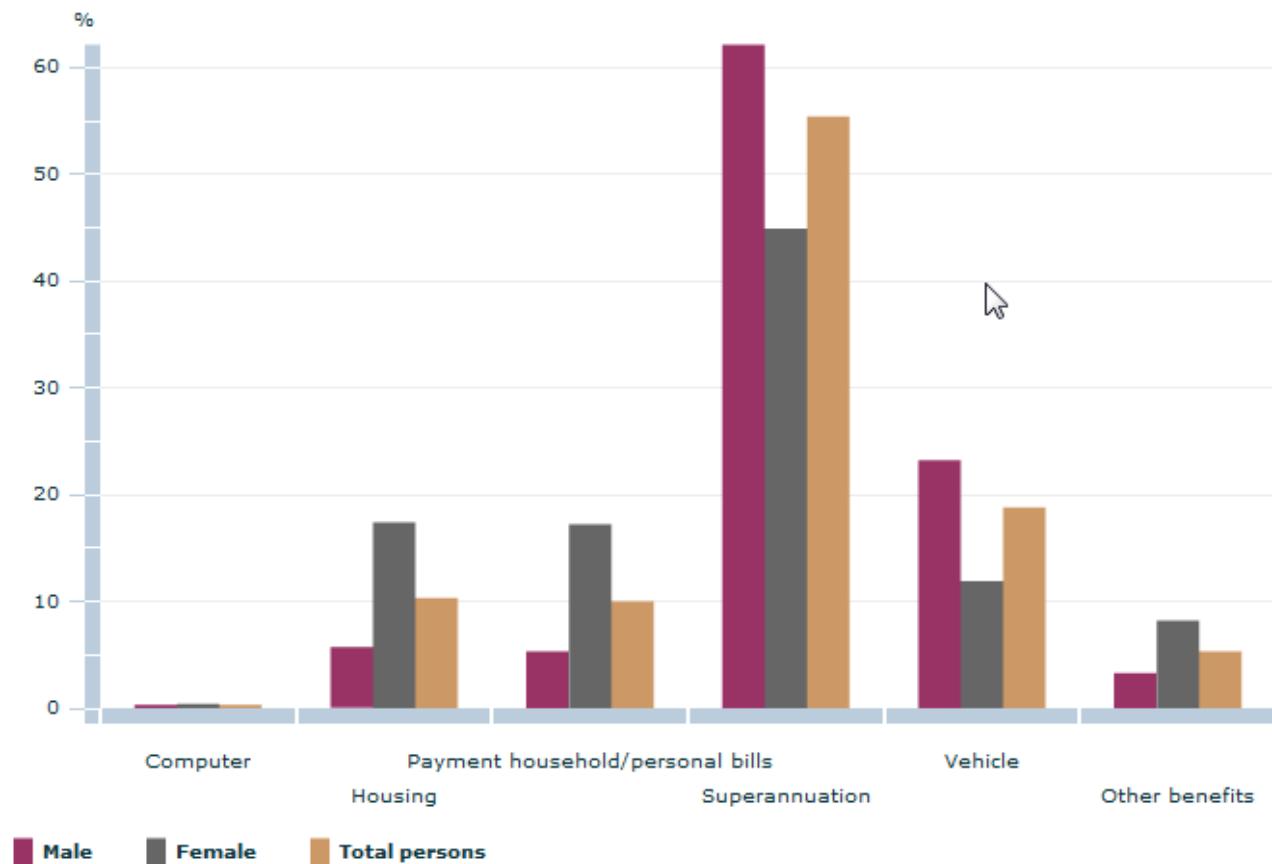
Graph 5 also shows that females, on average, salary sacrifice a higher proportion of their earnings than males per week, particularly in the higher skilled occupation group of Professionals.

For further Employee Earnings and Hours data, which are produced biannually and are inclusive of salary sacrifice, refer to [Employee Earnings and Hours, Australia, May 2012](#) (cat. no. 6306.0).

## TYPES OF SALARY SACRIFICE

Graph 6 shows the proportions of the types of salary sacrifice benefits, as produced by the Survey of Income and Housing.

**Graph 6. Distribution of Salary Sacrifice, Australia, 2009-10 (as proportion of earnings)**



**Source(s):** Household Income and Income Distribution (cat. no. 6523.0)

As shown by Graph 6, superannuation was by far the most common type of salary sacrifice benefit, accounting for 55.4% of all salary sacrificed income among working persons in Australia. This was followed by vehicles, which accounts for a further 18.8% of salary sacrificed income.

For further Household Income and Income Distribution data, refer to [Household Income and Income Distribution, Australia, 2009-10](#) (cat. no. 6523.0).

## FURTHER INFORMATION

Data relating to the AWCE series are available in Excel spreadsheets on the ABS website Downloads tab. For more details on the AWCE series, see the information paper titled [Information Paper: Release of Average Weekly Cash Earnings Series](#) (cat. no. 6302.0.55.003). This was released on 21 July 2011 and outlines the background to the series, the classifications and time periods to be released, and where to find the data on the website.

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Clair Phillips on Perth (08) 9360 5303.

## About this Release

Contains estimates of average weekly ordinary time earnings and average weekly total earnings for full-time adult employees and average weekly total earnings for all employees, classified by

sector and state or territory and by industry at the Australia level, for males, females and persons.

The frequency of the average weekly earnings series has changed from quarterly to biannual in 2012. The May 2012 publication was the last quarterly issue and the November 2012 is the first produced on a biannual basis. From 2013 onwards, AWE data will be produced twice a year relating to May and November reference periods.

## History of Changes

**This document was added or updated on 07/03/2013.**

**07/03/2013** This release has been updated to include an article on salary sacrifice. This article highlights how information from the ABS, in particular data from the biannual Average Weekly Earnings survey, can be used to analyse trends in the salary sacrifice arrangements of Australian employees.

## Explanatory Notes

### Explanatory Notes

#### EXPLANATORY NOTES

##### INTRODUCTION

**1** This publication contains biannual estimates of Average Weekly Earnings (AWE) based on information obtained from a sample survey of employers.

##### CONCEPTS, SOURCES AND METHODS

**2** Descriptions of the underlying concepts of Australia's AWE statistics, and the sources and methods used in compiling these estimates, are presented in Labour Statistics: Concepts, Sources and Methods, April 2007 (cat. no. 6102.0.55.001).

##### REFERENCE PERIOD

**3** AWE is produced for the June and December quarters. The reference period for the survey is the last pay period ending on or before the third Friday of the middle month of the reference quarter (i.e. May and November). Where a pay period is fortnightly or monthly, etc., the employer is requested to report only one week's proportion.

##### SCOPE AND COVERAGE

**4** All wage and salary earners who received pay for the reference period are represented in the AWE survey, except:

- members of the Australian permanent defence forces;
- employees of enterprises primarily engaged in agriculture, forestry and fishing;
- employees of private households;
- employees of overseas embassies, consulates, etc.;
- employees based outside Australia; and
- employees on workers' compensation who are not paid through the payroll.

**5** Also excluded are the following persons who are not regarded as employees for the purposes of this survey:

- casual employees who did not receive pay during the reference period;
- employees on leave without pay who did not receive pay during the reference period;
- employees on strike, or stood down, who did not receive pay during the reference period;
- directors who are not paid a salary;
- proprietors/partners of unincorporated businesses;
- self-employed persons such as subcontractors, owner/drivers, consultants;
- persons paid solely by commission without a retainer; and
- employees paid under the Australian Government's Paid Parental Leave Scheme.

**6** The sample for AWE, like most Australian Bureau of Statistics (ABS) business surveys, is selected from the ABS Business Register which is primarily based on registrations to the Australian Taxation Office's (ATO) Pay As You Go Withholding (PAYGW) scheme. The population is updated quarterly to take account of:

- new businesses;
- businesses which have ceased employing;
- changes in employment levels;
- changes in industry; and
- other general business changes.

**7** The estimates include an allowance for the time it takes newly registered businesses to be added to the survey population.

**8** Businesses which have ceased employing are identified when the ATO cancels their PAYGW registration. In addition, businesses which have not remitted under the PAYGW scheme for the previous five quarters are removed from the population.

## **SURVEY DESIGN**

**9** A sample of 5,500 employer units is selected from the ABS Business Register to ensure adequate state, industry and sector representation. The sample is updated each survey period to reflect changes in the ABS Business Register. These changes arise from the emergence of new businesses, takeovers and mergers, changes to industry classification, changes in the number of employees, and businesses which have ceased operations. Such updating of the register can contribute to movements in the AWE estimates.

**10** A sample redesign of the AWE survey was implemented in August 2009 incorporating the **Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (Revision 1.0)** (cat. no. 1292.0).

**11** The statistical unit for the survey comprises all the activities of an employer in a particular state or territory based on the Australian Business Number (ABN) unit or Type of Activity Unit (TAU). Each statistical unit is classified to an industry which reflects the predominant activity of

the business. The statistical units are stratified by state, sector, industry division and employment size, and within each stratum, statistical units are selected with equal probability.

## INDUSTRY CLASSIFICATION

**12** The statistics in this release are classified to industry in accordance with the [Australian and New Zealand Standard Industrial Classification \(ANZSIC\), 2006 \(Revision 1.0\)](#) (cat. no. 1292.0). This replaced the 1993 edition of ANZSIC in the August 2009 issue of this publication, which had been in use since 1994.

**13** The 2006 edition of ANZSIC was developed to provide a more contemporary industrial classification system, taking into account issues such as changes in the structure and composition of the economy, changing user demands and compatibility with major international classification standards.

## SURVEY FREQUENCY

**14** Prior to 2012, Average Weekly Earnings was conducted on a quarterly basis. However, the frequency of the AWE survey has been reduced to biannual with the May 2012 publication being the last quarterly issue and the November 2012 publication the first produced on a biannual basis. AWE data will be produced twice a year relating to the May and November reference periods only. Data will continue to be collected and released on the same basis as before for the May and November reference periods. For full details on the change in frequency, refer to the [Information Paper: Changes to Average Weekly Earnings, Australia, April 2012](#) (cat. no. 6302.0.55.002).

**15** As a result of the change in frequency, new seasonally adjusted and trend estimate series have been produced (refer to paragraphs 40-47 below).

## IMPACT OF STATISTICAL CHANGES IMPLEMENTED IN AUGUST 2009

**16** With effect from the August 2009 edition, this publication presents data on the basis of the 2006 edition of ANZSIC. At this time the ABS also implemented a sample redesign. The changes resulted in a shift in the level of the series from ANZSIC 1993 to ANZSIC 2006 estimates. The difference in the level of the two series was measured and backcast into the historical series to make a time series of estimates on an ANZSIC 2006 basis. Because of the changes to level estimates, quarterly and annual percentage change movements for the ANZSIC 2006 AWE series are not identical to those under ANZSIC 1993. Differences at the State, Sector and Australia levels are generally insignificant and within standard errors for each series.

**17** Published industry series have been backcast and data from August 1994 to May 2009 are available on the basis of both editions of ANZSIC on the ABS website. More information about these changes can be found in the [Information Paper: Changes to Average Weekly Earnings, Australia, Aug 2009](#) (ABS cat. no. 6302.0.55.002).

## CHANGES TO THE ABS BUSINESS REGISTER

**18** The introduction of The New Tax System in July 2000 had a number of significant implications for ABS business statistics, including changes to the populations for most business surveys. These implications are discussed in general terms in the [Information Papers: ABS Statistics and The New Tax System, 2000](#) (cat. no. 1358.0) and [Improvements in ABS Economic Statistics \[Arising from The New Tax System\], 2002](#) (cat. no. 1372.0). In relation

to AWE, these changes caused a greater than normal rotation of businesses included in the sample for the May 2001 and August 2002 surveys.

## **STATISTICAL UNITS DEFINED ON THE ABS BUSINESS REGISTER**

**19** The ABS uses an economic statistics units model of the ABS Business Register to describe the characteristics of businesses, and the structural relationships between related businesses. The units model is also used to break groups of related businesses into relatively homogeneous components that can provide data to the ABS.

**20** The current units model was introduced into the ABS in mid 2002, to better use the information available as a result of The New Tax System. The model allocates businesses to one of two sub-populations. The vast majority of businesses are in what is called the ATO Maintained Population, while the remaining businesses are in the ABS Maintained Population. Together, these two sub-populations make up the ABS Business Register population.

### **ATO Maintained Population**

**21** Most businesses and organisations in Australia need to obtain an ABN, and are then included on the ATO Australian Business Register. Most of these businesses have simple structures; therefore the unit registered for an ABN will satisfy ABS statistical requirements. For these businesses, the ABS has aligned its statistical units structure with the ABN unit. The businesses with simple structures constitute the ATO Maintained Population, and the ABN unit is used as the economic statistics unit in economic collections.

### **ABS Maintained Population**

**22** For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS maintains its own units structure through direct contact with businesses. These businesses constitute the ABS Maintained Population. This population consists typically of large, complex and diverse businesses. The statistical units model described below was introduced to cover such businesses.

**23** Enterprise Group: This is a unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the **Corporations Legislation Amendment Act 1991**), including legal entities such as companies, trusts, and partnerships. Majority ownership is not required for control to be exercised.

**24** Enterprise: The enterprise is an institutional unit comprising (i) a single legal entity or business entity, or (ii) more than one legal entity or business entity within the same Enterprise Group and in the same institutional subsector (i.e. they are all classified to a single Standard Institutional Sector Classification Australia subsector).

**25** Type of Activity Unit (TAU): The TAU comprises one or more business entities, sub-entities or branches of a business entity within an Enterprise Group that can report production and employment data for similar economic activities. When a minimum set of data items is available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision.

**26** For more information please refer to the [Information Paper: Improvements in ABS Economic Statistics \[Arising from The New Tax System\], 2002](#) (cat. no. 1372.0).

## **GENERAL NOTES ON ESTIMATES**

**27** AWE statistics represent average gross (before tax) earnings of employees and do not relate to average award rates or to the earnings of the 'average person'. AWE estimates are derived by dividing estimates of weekly total earnings by estimates of the number of employees. Changes in the averages may be affected not only by changes in the level of earnings of employees but also by changes in the overall composition of the wage and salary earner segment of the labour force.

**28** There are several factors which can contribute to compositional changes, including variations over time in the proportions of full-time, part-time, casual and junior employees; variations in the occupational distribution within and across industries; variations in the distribution of employment between industries; and variations in the proportion of male and female employees. Such effects may apply differently within different states and territories, and over time.

## **AVERAGE WEEKLY CASH EARNINGS**

**29** The definition of earnings currently used in the AWE survey is, broadly, current and regular payments in cash to employees for work done. Thus, earnings series from the AWE survey historically excluded amounts salary sacrificed, as these have been considered conceptually as payments in kind. However, under the revised conceptual framework for measures of employee remuneration, as presented in Information Paper: Changes to ABS Measures of Employee Remuneration, 2006 (cat. no. 6313.0), amounts salary sacrificed are now considered conceptually to be wages and salaries in cash. Accordingly, the AWE questionnaire was redesigned, and from August 2007, the collection of information on amounts salary sacrificed by employees commenced. However, the AWE series has continued to be published on the old conceptual basis (i.e. exclusive of amounts salary sacrificed) to maintain long term comparability of the time series.

**30** Although the AWE survey has conceptually excluded amounts salary sacrificed, in practice, there was evidence that earnings series from the AWE survey had inadvertently included some amounts salary sacrificed. The ABS worked closely with data providers to identify any instances of misreporting, and to amend their reporting practices where necessary.

**31** As a result of the separate collection of salary sacrificed amounts from August 2007, and other analyses, the ABS was able to quantify the extent of mis-reporting that had occurred, and to estimate the impact of this mis-reporting on the historical series. Consequently, AWE data series for August 1996 through to May 2008 were revised to exclude all amounts salary sacrificed. For further information see Information Paper: Revisions to the Average Weekly Earnings Series, Aug 2008 (cat. no. 6302.0.55.001) released 11 November 2008.

**32** Since the May 2011 issue of this publication, an Average Weekly Cash Earnings (AWCE) series has also been released as an additional (not replacement) series of the AWE series. The difference between the AWCE and the AWE series is the average weekly amount salary sacrificed. Data relating to the AWCE series are available in Excel spreadsheets on the ABS website Downloads tab. For more information relating to the AWCE series, refer to the Information Paper: Release of Average Weekly Cash Earnings Series, May 2011 (cat. no. 6302.0.55.003) and for broad level analysis and findings refer to the Information Paper: Changes to Average Weekly Earnings, Australia, April 2012 (cat.no. 6302.0.55.002).

## **COMPARABILITY OF SERIES**

**33** The current AWE series, based on information obtained from a sample survey of employers, was introduced in August 1981. Prior to August 1981, the AWE series was based principally on information from payroll tax returns. Revised estimates of AWE for the period August 1981 to November 1983 were included in Average Weekly Earnings, States and Australia, March 1984 (cat. no. 6302.0) published on 12 July 1984 and available on the ABS website. Users who need a measure of the movement in earnings for a period which spans both the payroll tax based and employer survey series should refer to Table 3 in that publication which presents both series linked to a common index base (August 1981 = 100.0).

## COMPARABILITY WITH WAGE PRICE INDEX

**34** Period-to-period movements for the AWE series are not comparable with those for the Wage Price Index (WPI). It is important to recognise that the two series have different purposes and concepts and use different sample selection and estimation methodologies.

**35** The AWE survey is designed to measure the level of average earnings in Australia at a point in time. It does this by collecting information from businesses on their number of employees and their total gross weekly earnings for a specific pay period each quarter. The WPI is a price index designed to measure the change over time in the price of labour. It does this by pricing specific jobs, in terms of wage and salary payments to employees occupying the jobs, and collecting information from businesses each quarter on price changes in those jobs. It is unaffected by changes in the quality and quantity of labour purchased by employers.

**36** In addition to changes in the price of labour, AWE estimates are affected by changes in hours worked and by compositional changes in the employee workforce (see paragraphs 27 and 28). The WPI prices a fixed quantum of labour services for each job, and hence changes to base earnings resulting from increases in hours worked or from changes in the composition of the employee workforce will not be reflected in the index.

**37** For further information on the WPI, please refer to the Explanatory Notes of Labour Price Index, Australia (cat. no. 6345.0) and Labour Price Index: Concepts, Sources and Methods, 2004 (cat. no. 6351.0.55.001) which are available on the ABS web site.

## EFFECTS OF ROUNDING

**38** Estimates of average weekly earnings are rounded to the nearest 10 cents.

**39** Percentage changes are calculated on the actual values and may differ from calculations based on rounded estimates.

## SEASONAL ADJUSTMENT

**40** Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences can be more clearly recognised. Seasonal adjustment does not aim to remove the irregular or non-seasonal influences which may be present in any particular series. Influences that are volatile or unsystematic can still make it difficult to interpret the movement of the series even after adjustment for seasonal variation. If a time series has no identifiable seasonality it is not seasonally adjusted.

**41** As part of the transition to a biannual frequency, an assessment was conducted on the feasibility of releasing biannual seasonally adjusted and trend estimates. It was determined that reducing the frequency of collection did not eliminate observed seasonality for some time series leaving 27 biannual series needing seasonal adjustment. Producing seasonally adjusted estimates for biannual time series poses challenges as producing seasonally adjusted

estimates for this frequency is non-standard in ABS and other international agency publications. As a result, the seasonal adjustment has been performed using an experimental methodology.

**42** The new biannual seasonally adjusted series, commencing with the November 2012 issue, uses the ABS's existing quarterly seasonal adjustment method. Original data series are synthesised from actual data collected for reference periods and data for the 'missing' observations imputed using linear interpolation based on the succeeding and proceeding survey estimates. These synthesised estimates are used in the seasonal adjustment process and are not released. The seasonally adjusted statistics in this publication use the concurrent seasonal adjustment technique and Autoregressive Integrated Moving Average (ARIMA) modelling to estimate factors from this quarterly synthesised original data.

**43** Under concurrent seasonal adjustment, the estimates of seasonal factors are refined as new or revised original estimates become available each period. However, for this collection, the seasonally adjusted estimates up to and including May 2012 presented in the May 2012 issue will not be revised as they were based on actual quarterly observations.

## TREND ESTIMATES

**44** Seasonally adjusted estimates can be smoothed to reduce the impact of irregular or non-seasonal influences. Smoothed seasonally adjusted series are called trend estimates.

**45** The ABS considers that trend estimates provide a more reliable guide to the underlying direction of the original estimates and are more suitable than either the seasonally adjusted or original estimates for most business decisions and policy advice.

**46** The trend estimates in this publication, obtained by dampening out the irregular component from the seasonally adjusted series, are calculated using a centred 7-term Henderson moving average of the seasonally adjusted estimates of quarterly synthesised original data. Estimates for the two most recent periods cannot be calculated using this centred average method: instead an asymmetric average is used. This can lead to revisions in the trend estimates for the last two observations when data become available for later periods. Revisions of trend estimates will also occur with revisions to the original data and re-estimation of seasonal adjustment factors. If a series is highly volatile then the trend estimates will be subject to greater revision for the latest few observations as new data become available. However, it is important to note that this does not make the trend series inferior to the seasonally adjusted or original series.

**47** Please note that calculating seasonally adjusted and trend estimates on the synthesised quarterly series has resulted in a slight change in the level of the data.

## RELATED PUBLICATIONS

**48** The following publications contain related information:

- Australian Labour Market Statistics (cat. no. 6105.0)-issued quarterly;
- Employee Earnings and Hours, Australia (cat. no. 6306.0)-issued biennially;
- Employee Earnings, Benefits and Trade Union Membership, Australia (cat. no. 6310.0)-issued annually;
- Employment and Earnings, Public Sector, Australia (cat. no. 6248.0.55.002)-issued annually;
- Experimental Estimates, Regional Wage and Salary Earner Statistics, Australia (cat.no. 5673.0);
- Gender Indicators, Australia (cat. no. 4125.0)-issued biannually;
- Information Paper: Changes to ABS Measures of Employee Remuneration, 2006

- (cat. no. 6313.0)-issued 14 November 2006;
- [Information Paper: Changes to Average Weekly Earnings, Australia, Aug 2009](#) (cat. no. 6302.0.55.002)-issued 5 November 2009;
  - [Information Paper: Changes to Average Weekly Earnings, Australia, Apr 2012](#) (cat. no. 6302.0.55.002)-issued 16 April 2012;
  - [Information Paper: Improvements in ABS Economic Statistics \[Arising from The New Tax System\], 2002](#) (cat. no. 1372.0)-issued 6 May 2002;
  - [Information Paper: Release of Average Weekly Cash Earnings Series, May 2011](#) (cat. no. 6302.0.55.003)-issued 21 July 2011;
  - [Information Paper: Revisions to Average Weekly Earnings Series, Aug 2008](#) (cat. no. 6302.0.55.001)-issued 11 November 2008;
  - [Labour Force, Australia](#) (cat. no. 6202.0)-issued monthly;
  - [Labour Price Index, Australia](#) (cat. no. 6345.0)-issued quarterly; and
  - [Labour Statistics: Concepts, Sources and Methods, Apr 2007](#) (cat. no. 6102.0.55.001)-issued 6 July 2007.

## Glossary

### GLOSSARY

#### **Adult employees**

Adult employees are those employees 21 years of age or over and those employees who, although under 21 years of age, are paid at the full adult rate for their occupation.

#### **Average weekly cash earnings**

Average weekly cash earnings represents average gross (before tax) earnings of employees, inclusive of salary sacrifice. Average weekly cash earnings differs from average weekly earnings by the average weekly amount salary sacrificed.

#### **Average weekly earnings**

Average weekly earnings statistics represent average gross (before tax) earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Estimates of average weekly earnings are derived by dividing estimates of weekly total earnings by estimates of number of employees.

#### **Employees**

Employees refer to all wage and salary earners (as defined in paragraphs 4 and 5 of the Explanatory Notes) who received pay for any part of the reference period.

#### **Full-time employees**

Full-time employees are permanent, temporary and casual employees who normally work the agreed or award hours for a full-time employee in their occupation and received pay for any part of the reference period. If agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 35 hours or more per week.

#### **Reference period**

The reference period for the survey is the last pay period ending on or before the third Friday of the middle month of the reference quarter. Where a pay period is fortnightly or monthly, etc., the employer is requested to report only one week's proportion.

## **Salary Sacrifice**

Salary sacrifice is defined as an arrangement where an employee agrees to forgo part of their pre-tax salary in return for benefits. Common types of salary sacrifice arrangements include pre-tax contributions to superannuation funds and novated leases for motor vehicles.

## **Sector**

Public sector includes all local government authorities and government departments, agencies and authorities created by, or reporting to the Commonwealth and State parliaments. All remaining employees are classified as private sector.

## **Weekly ordinary time earnings**

Weekly ordinary time earnings refers to one week's earnings of employees for the reference period, attributable to award, standard or agreed hours of work. It is calculated before taxation and any other deductions (e.g. superannuation, board and lodging) have been made. Included in ordinary time earnings are award, workplace and enterprise bargaining payments, and other agreed base rates of pay, over-award and over-agreed payments, penalty payments, shift and other allowances, commissions and retainers, bonuses and similar payments related to the reference period, payments under incentive or piecework, payments under profit sharing schemes normally paid each pay period, payment for leave taken during the reference period, all workers' compensation payments made through the payroll, and salary payments made to directors. Excluded are amounts salary sacrificed, non cash components of salary packages, overtime payments, reimbursements to employees for travel, entertainment, meals and other expenditure incurred in conducting the business of their employer, and other payments not related to the reference period.

## **Weekly total earnings**

Weekly total earnings of employees is equal to weekly ordinary time earnings plus weekly overtime earnings.

# **Abbreviations**

## **ABBREVIATIONS**

ABN	Australian Business Number
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ARIMA	autoregressive integrated moving average
ATO	Australian Taxation Office
AWCE	average weekly cash earnings
AWE	average weekly earnings
PAYGW	pay-as-you-go withholding
SISCA	Standard Institutional Sector Classification of Australia
TAU	type of activity unit
WPI	wage price index

# **Quality Declaration - Summary**

## **QUALITY DECLARATION - SUMMARY**

### **INSTITUTIONAL ENVIRONMENT**

For information on the institutional environment of the Australian Bureau of Statistics (ABS), including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment.

### **RELEVANCE**

The biannual Survey of Average Weekly Earnings (AWE) produces estimates of average gross weekly earnings associated with employee jobs in Australia, at a point in time. Level estimates and estimates of movement in AWE are linked to both state and federal legislation for adjusting a variety of government payments. AWE data are also used for analysing movements in average earnings, framing and supporting wage claims/submissions, monitoring wage equity and developing taxation and social policies.

The key earnings series produced from the survey are:

- full-time adult ordinary time earnings (commonly referred to as AWOTE);
- full-time adult total earnings;
- all employees total earnings.

Each of the above series is available for males, females and persons. Estimates are available by state/territory, industry and sector. Seasonally adjusted and trend estimates are produced for key series.

### **TIMELINESS**

AWE is produced for the June and December quarters. The reference period for the survey is the last pay period ending on or before the third Friday of the middle month of the reference quarter (i.e. May and November). Where a pay period is fortnightly or monthly, etc., the employer is requested to report only one week's proportion.

Prior to 2012, Average Weekly Earnings was conducted on a quarterly basis. The frequency of the AWE survey was changed to biannual with effect from the 2012/13 financial year. The May 2012 publication was the last quarterly issue and the November 2012 the first produced on a biannual basis.

Survey estimates are released approximately three months after the reference period.

### **ACCURACY**

Information for the AWE survey is collected via mail questionnaires which are sent to approximately 5,500 employers. The population of employers is stratified by state, sector, industry division and employment size to ensure adequate state, sector and industry representation. A minimum response rate of 95% is achieved for the survey as a whole and for

each state, sector and industry.

There are two principal sources of error in surveys, sampling error and non-sampling error. Non-sampling error arises from inaccuracies in collecting, recording and processing the data. Every effort is made to minimise non-sampling error by the careful design and testing of questionnaires, detailed checking of the reported data and direct follow up with providers where significant errors are detected.

Sampling error occurs when a sample or subset of the population is surveyed rather than the entire population. One measure of the likely difference resulting from not including all of the population in the survey is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if the whole population had been included in the survey.

AWE estimates are seasonally adjusted to remove the estimated effects of normal seasonal variation from the series. The seasonally adjusted series are further smoothed to reduce the impact of irregular or non-seasonal factors. Smoothed seasonally adjusted series are called trend estimates. As data becomes available for the next period there are usually revisions in the seasonally adjusted and trend estimates for the previous periods.

The ABS considers that trend estimates provide a more reliable guide to the underlying direction of the original estimates and are more suitable than either the seasonally adjusted or original estimates for most business decisions and policy advice.

## **COHERENCE**

The current AWE series, based on information obtained from a sample survey of employers, was introduced in August 1981. Prior to August 1981 the AWE series was based primarily on information from payroll tax returns.

Data collection methodology has been improved over time, including survey definitions and sample design. Seasonally adjusted estimates were introduced in 1983 and trend estimates were introduced in 1993.

The AWE survey uses Australian standard classifications to facilitate data comparability across statistical series. From the August 2009 issue of the AWE publication, data is presented using the 2006 edition of the Australian and New Zealand Standard Industrial Classification (ANZSIC). The 2006 edition of ANZSIC was developed to provide a more contemporary industrial classification system, taking into account issues such as changes in the structure and composition of the economy, changing user demands and compatibility with major international classification standards.

Industry data from August 2009 is only available on an ANZSIC 2006 basis. Published industry series have been backcast and data from August 1994 to May 2009 are available on the website on the basis of both the 2006 edition of ANZSIC, and the previous 1993 edition.

The ABS conducts a number of sample surveys of businesses which collect information about wages and salaries. One of these, the Wage Price Index, is designed to measure the change over time in the price of labour. Period-to-period movements for the AWE series are not comparable with those for the Wage Price Index as the two series have different purposes and concepts and use different sample selection and estimation methodologies.

## **INTERPRETABILITY**

Average weekly earnings statistics represent average gross earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Changes in the averages may be affected not only by changes in the level of earnings of employees, but also by changes in the overall composition of the wage and salary earner segment of the labour force.

There are several factors which can contribute to compositional changes, including variations over time in the proportions of full-time, part-time, casual and junior employees; variations in the occupational distribution within and across industries; variations in the distribution of employment between industries; and variations in the proportion of male and female employees. Such effects may apply differently within different states and territories, and over time.

**Average Weekly Earnings, Australia** (cat. no. 6302.0) contains Explanatory Notes, a Glossary and a Technical Note which provide further information about data sources, terminology and other technical aspects of the series.

## ACCESSIBILITY

**Average Weekly Earnings, Australia** (cat. no. 6302.0) is available from the ABS website as an electronic version of the summary data and Explanatory Notes and as downloadable Excel data files for time series data.

# Sampling Error (Technical Note)

## TECHNICAL NOTE SAMPLING ERROR

### RELIABILITY OF ESTIMATES

**1** As the estimates in this publication are based on information relating to a sample of employers, they are subject to sampling variability. That is, they may differ from the estimates that would have been produced if the information had been obtained from all employers. This difference, called **sampling error**, should not be confused with inaccuracy that may occur because of imperfections in reporting by respondents or in processing by the ABS. Such inaccuracy is referred to as **non-sampling error** and may occur in any enumeration whether it be a full count or a sample. Efforts have been made to reduce non-sampling error by careful design of questionnaires, detailed checking of returns and quality control of processing.

**2** The sampling error associated with any estimate can be estimated from the sample results. One measure of sampling error is given by the **standard error** which indicates the degree to which an estimate may vary from the value which would have been obtained from a full enumeration (the 'true value'). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about nineteen chances in twenty that the difference will be less than two standard errors. Standard errors are provided in tables 3,6,9,10 and 13 to 17.

**3** An example of the use of a standard error is as follows. If the estimated average earnings were \$900.00 with a standard error of \$7.00, then there would be about two chances in three that a full enumeration would have given an estimate in the range \$893.00 to \$907.00 and about nineteen chances in twenty that it would be in the range \$886.00 to \$914.00.

**4** Another measure of the sampling error is the **relative standard error**, which is obtained by expressing the standard error as a percentage of the estimate.

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